

Benefits of Using IPM in Schools

- Early pest detection
- Reduced pesticides use, which decreases risk to the environment
- Use of less toxic materials
- Cost savings
- Enhanced safety to students, faculty and staff
- Increased parent satisfaction of child's safety
- May improve student and staff attendance
- May reduce food waste from pest contamination

Successful IPM Stories



IPM has been used in commercial agriculture since 1959.

Although IPM in schools is relatively new (since 1989 in Maryland), there are many success stories detailing pesticide reduction and cost savings to school districts.

- Monroe County, Indiana, schools eliminated 90 percent of pesticide applications and reduced pest control costs by 35 percent by using IPM.

- New York City schools (32 districts with 1,200 buildings) eliminated exposed rodenticides and indoor insecticide dusting and decreased aerosol insecticide spraying by 98 percent. These districts used over 8,000 tubes of silicon glue to seal pest harborages and entry points.

- In Santa Barbara, California, IPM techniques cut contracted pest control costs from \$1,740 per year to \$135 per year at Vista de las Cruces school.

Similar accounts can be reported from IPM projects in 13 other states.

Where Can I Get More Information?

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Web site maintained by the Iowa State University Extension with information on pesticide use in schools, with links to many other informational sites.

Poison Information Center

National Hotline 1-800-222-1222 for emergency information from pesticide poisoning.

National Pesticide Information Center

A 24-hour number (800-858-7378) for information on the acute or chronic effects of pesticides.

Recognition & Management of Pesticide Poisonings

www.epa.gov/pesticides/safety/healthcare/

Chemical Manufacturers of America

1-800-262-8200, for non-emergency safety and health information on many chemicals, including pesticides.

INTEGRATED Pest Management



Pest Control Information for School Health Care Staff

DEVELOPED BY

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What is IPM?

Integrated Pest Management (IPM) is a scientific, environmentally sensitive approach to solving pest problems that focuses on evaluating the cause of pest infestations. IPM is used to manage pest damage by the most economical means with the least possible hazard to people, property and the environment. IPM relies on “pest proofing” to prevent pest access and monitoring to determine the location and degree of the problems. Routine housekeeping and maintenance can eliminate pest attractions and habitats.

Schools may be four to five times more densely populated than office buildings of similar size. The number of children with respiratory sensitivities, such as asthma, has risen dramatically throughout the U.S. in the last several decades. In addition to the traditional medical concerns of school-age children, school health care staff should become aware of the indicators of pesticide exposure and safe methods to control pest problems.

Little information exists nationwide on the extent to which children are exposed to pesticides while at school. In 1993, the National Research Council published a landmark report documenting that infants and children face higher risks from exposure to pesticides than adults. This is related to faster metabolisms, the rapid development of their organs and the retention of toxins for longer periods for children relative to adults. Children are also in close contact with their environment (playing on the floor and lawn), and have frequent hand-to-mouth contact.

Knowing your options is the key to pest management. Sometimes a non-chemical strategy is as effective and convenient as a chemical alternative. For many pests, total elimination is almost impossible, but it is possible to manage them at acceptable levels.



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Chemical agents that repel, change the regular growth rate of, kill or otherwise reduce levels of a targeted pest. These products are registered as herbicides (weeds), insecticides (insects, spiders or mites), fungicides (fungi), rodenticides (rats & mice), or other chemicals (such as disinfectants and household cleaners).

IPM Methods

Methods available

to you include pest prevention, non-chemical management tools and pesticides. IPM may include:

- **Monitoring:** sticky traps, inspections and good record keeping used to pinpoint problems.
- **Physical:** removing food and water sources, caulking around pipes, fixing leaky faucets or repairing door thresholds to prevent pest entry into buildings.
- **Cultural:** staff training and associated behavioral changes and proper landscape plant selection and care.
- **Biological:** using natural enemies to control the pest. An example is ladybugs eating aphids that are feeding on a school tree or shrub.
- **Chemical:** use of a least toxic pesticide in concealed pest activity locations, which was preceded with various non-chemical attempts to manage the pest. Traditional pest control often includes the use of pesticides on a regular, preventive treatment schedule, with broad application that will include exposed surfaces.

Common Symptoms of Pesticide Exposure

Even when pesticides are applied carefully, they can travel on air currents to affect chemically sensitive people. After an application, pesticide residues may persist for an extended period, especially within buildings where sunlight and soil bacteria are not likely to assist in chemical decomposition. Symptoms may appear within minutes or hours after an exposure and vary considerably depending on the specific pesticide and route of exposure. Because some of the symptoms are similar to those of other illnesses, such as the flu, the effects of pesticides can be misdiagnosed.

External irritants that contact skin may cause itching, swelling or blistering. The mucous membranes of the eyes, nose, mouth and throat are also quite sensitive to chemicals. Pesticide exposure may cause stinging and swelling of these membranes.

If a pesticide is swallowed, inhaled or absorbed through the skin, various responses can be observed. Symptoms vary from organ to organ, but may include shortness of breath, salivation, nausea, vomiting, abdominal cramps, sleepiness, headache, muscle twitching, numbness or more severe symptoms.

If someone develops symptoms after working with or being exposed to pesticides, seek primary medical assistance immediately to determine if the symptoms are pesticide related. All incidents of suspected pesticide exposure (one of the state’s reportable diseases) must be reported to the Iowa Department of Public Health.

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Includes statements of active ingredients, signal words (“Caution,” “Warning,” and “Danger” in order of increasing toxicity), precautionary statements, environmental hazards and first aid instructions. Inert ingredients do not need to be listed on the label, but may also be classified as hazardous chemicals.

